DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 82.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-017488
Date Inspected: 11-Oct-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Westmont Industries

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Santa Fe Springs, CA.

CWI Name:	R. Rodriguez, R. Dominguez	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☐ Yes ☐ No ☑ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Travelers

Summary of Items Observed:

The Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding of the Travelers. The QA Inspector arrived on site to randomly observe the WMI Quality Control (QC) Inspectors in process and completed visual and nondestructive testing. Upon the arrival of the QA Inspector the following observations were made:

Traveler Test Rack

The QA Inspector observed WMI production fitter, Mr. Jesse Araya, continuing to perform grinding and fabrication layout activities for the Traveler Test Rack. The QA Inspector observed that the piece mark was identified as Vertical Post Assembly 39-C13, Vertical Post Assembly identified as 38-B13 and that the grinding and layout, was being performed on the top and bottom plates,to vertical post Tube Steel (TS) material. The QA Inspector observed that no welding was performed on the above mentioned assemblies, on this date.

Trolley Test Stand

On this date, the QA Inspector observed Smith Emery QC Inspector Ruben Dominguez performing Ultrasonic Testing (UT), on piece marks designated as Rail X Web Splices, per the shop drawings, WMI-TTC-4. The QA Inspector observed that the FCAW had been completed on the previous shift and the welds were currently cooled to ambient temperature. The QA Inspector observed that per the shop drawings, these weld joints are designated as Complete Joint Penetration, 45 degree double bevel preparation. The QA Inspector observed QC Inspector Dominguez initially perform a Lamination scan, utilizing a 0 degree transducer (straight beam) on the completed weld joints, to verify that laminar reflectors were not present in the weld joint testing area. After observing QC Inspector Dominguez performing the Lamination scan, Mr. Dominguez explained that no rejectable indications

were found and the inspection was being performed in accordance to approved procedure SE-UT-CT-D1.1-104 Rev. #2. The QA Inspector then observed Mr. Dominguez utilizing a 70 degree Lucite wedge, attached to a 2.25 MHz transducer, to perform Shear Wave testing, on the above mentioned weld joint splices. The QA Inspector observed Mr. Dominguez utilizing a Krautkramer USN 52L testing instrument perform the testing on both sides of the weld axis and during the testing, the scanning pattern appeared to be in compliance with AWS Fig. 6.24. After testing was complete, Mr. Dominguez explained that no rejectable indications were found and an applicable Ultrasonic Testing report will be completed, for the inspection.

See attached picture below.

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Jose Rodriguez (WID # 3031) continuing to perform Flux Core Arc Welding (FCAW) activities, for the Trolley Test Stand. The QA Inspector observed that Mr. Rodriguez was performing the FCAW in the 2F (horizontal) position and the fit up appeared to be a T joint, with an 8 mm fillet weld reinforcement, per the approved shop drawings. The QA Inspector observed that the FCAW was being performed on the piece mark identified as Rail X flange to web plate, per the shop drawing # WMI-TTC-4. The QA Inspector observed that Mr. Dominguez had completed the welding early in the am. Later in the afternoon, QA Inspector then observed QC Inspector Dominguez performing Magnetic Particle Testing (MT) on these fillet welds, for the above mentioned assembly. At this time, the QA Inspector observed that the welds had cooled to ambient temperature. The QA Inspector then spoke with QC Inspector Dominguez and Mr. Dominguez explained that he was currently performing the testing in accordance to the approved MT Procedure SE-MT-CT.D1.1-105, Rev. # 1 and the testing is being performed on 10% of the completed welds. The QA Inspector was later informed by QC Inspector Dominguez that no rejectable indications were found after testing and that an applicable Magnetic testing report will be completed, per the contract requirements. The QA Inspector had been previously informed that the above mentioned welds were visually acceptable and the QA Inspector observed that the above mentioned testing being performed, appeared to be in compliance with the contract requirements.

SAS-EB Traveler
Elevated Truss Section
On this date, the QA Inspector observed Westmont Industries (WMI) production Daniel Grayum (WID # 3049) performing FCAW and grinding activities on the Traveler Elevated Truss Section Assembly. The QA Inspector observed that the activities were being performed on completed Fillet and Flare Groove welds and were previously marked areas by QC Inspector Ruben Dominguez, during the Visual Testing of the welds. The QA Inspector observed that the marked areas included excessive undercut, underfill, excessive weld spatter and weld profiles which appeared to be non conforming, to the requirements of AWS D1.1 2002, Visual Testing Criteria. The QA Inspector observed that Mr. Grayum continued these activities throughout the shift.

Fixed Stairs Section
On this date, the QA Inspector observed Westmont Industries (WMI), production welder Raymundo Anaya and production fitter, Cesar Canales performing fitting activities for the fabrication of the Fixed Stairs Section Assembly.
The QA Inspector observed Mr. Anaya and Mr. Canales utilizing the overhead bay crane, chain and hook to place around the previously completed Traveler Frame assembly, identified as A237. Once these items were placed, the QA Inspector observed that the assembly was then lifted and moved to the area in which the fabrication will be

performed. Once the frame was moved, the QA Inspector then observed that the previously completed Frame Assembly, identified as B237 was then lifted in the same manner and placed in the identical area. The QA Inspector then observed the crane being utilized to lift the Frame A237, in the vertical position. Once the Frame was in the vertical position, the QA Inspector observed Mr. Anaya and Canales reference the shop drawings and then place and tack weld multiple pieces of temporary angle iron material, presumably to secure the Frame in place, while fitting activities are being performed.

Frame Assemblies
On this date, the QA Inspector observed Westmont Industries (WMI), production welder Eutimo Lopez (WID # 3035), continuing to perform Flux Core Arc Welding (FCAW) activities for the SAS-EB Traveler frames. The QA Inspector observed Mr. Lopez performing the FCAW on previously fit and tack welded Tube Steel (TS) and plate material, for the Frame Assembly identified as B240, per the shop drawings. The QA Inspector randomly observed that Mr. Lopez continued the FCAW throughout the end of the shift.

On this date, the QA Inspector observed Westmont Industries (WMI), production welder Juan Jimenez (WID # 3059), continuing to perform Flux Core Arc Welding (FCAW) activities for the E2/E3-EB Traveler frames. The QA Inspector observed Mr. Jimenez performing the FCAW on connection plate material, for the piece mark identified as assembly 56-C246. The QA Inspector randomly observed that Mr. Jimenez continued the FCAW throughout the end of the shift.

The QA Inspector observed that Smith-Emery QC Inspector Ruben Dominguez was present, during the above mentioned welding and tacking activities and QC Inspector Dominguez explained that approved Welding Procedure Specifications (WPS's) were being utilized. The QA Inspector randomly observed that the applicable WPS's and copies of the shop drawings, were located near each work station, where the above mentioned FCAW and fitting activities were being performed. The QA Inspector randomly verified that the consumable material, utilized during the welding was in compliance to the applicable WPS and that the above mentioned welders were currently qualified for the applicable process and position of welding. The QA Inspector randomly observed QC Inspector Dominguez verifying the in-process welding parameters, including voltage, amperage, pre-heat and travel speed and the parameters appeared to be in compliance to the applicable WPS.

On this date, the QA Inspector observed Westmont Industries (WMI) production personnel Mr. Tim Hartnett, cutting material which will be utilized, for the Traveler Frame Assemblies. The QA Inspector observed that Mr. Hartnett was continuing to utilize a Marvel® 15 A series horizontal band saw, to perform the cutting operations and observed that the material being cut, is identified as 1.5" x 1.5" x .250" (38 mm x 38 mm x 6 mm) rectangular Tube Steel (TS). The QA Inspector spoke with Mr. Hartnett and he explained that WMI shop supervisor, Mr. George Grayum, had provided a list of TS material, with specific dimensions, per the shop drawing bill of materials. Mr. Harnett further explained that he was cutting the material to these specific lengths and marking the material with a white paint stick marker, to identify the individual cut pieces of material. After the material was cut and marked, the QA Inspector observed Mr. Hartnett utilize the overhead bay crane, chain and hook to lift and place the material into neatly stacked piles, nearby the cutting area. The QA Inspector noted that the Mill Test Reports (MTR's) had been previously provided and the QA Inspector had previously written "OK to Cut" on the material.

See attached picture below.

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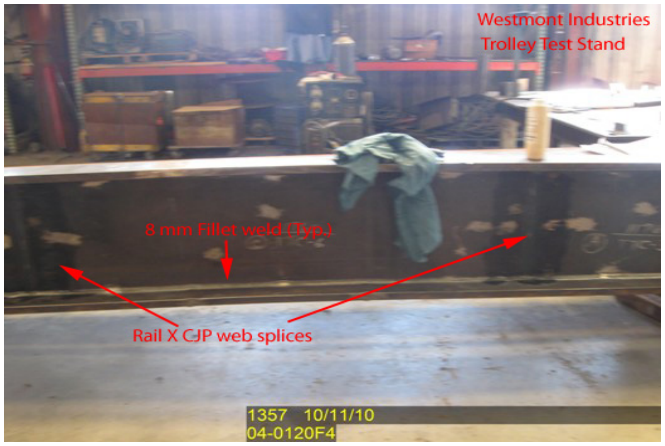

Summary of Conversations:

On this date, the QA Inspector was requested by WMI QCM Rick Rodriguez, to perform an inspection on cut material at Namasco Steel, prior to Namasco shipping to WMI. The QA Inspector arrived as requested. See completed TL6011, on this date, for additional details.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Edmondson,Fred	QA Reviewer